

Title (en)

MAGNETISED TRANSDUCER ELEMENT FOR TORQUE OR FORCE SENSOR

Title (de)

MAGNETISIERTES WANDLERELEMENT FUER EINEN DREHMOMENT- ODER KRAFTSENSOR

Title (fr)

ELEMENT A TRANSDUCTEUR AIMANTE POUR DETECTEUR DE COUPLE OU DE FORCE

Publication

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Application

EP 00953303 A 20000814

Priority

- GB 0003119 W 20000814
- GB 9919065 A 19990812

Abstract (en)

[origin: WO0113082A1] A magnetic torque transducer for a structure such as a disc (10) through which torque is transmitted between a central shaft (20) to which the disc is mounted and an outer periphery such as a gear wheel (24). The intervening region through which torque is transmitted is magnetised to provide a transducer element (22) having two magnetised, annular regions (12, 14: 54, 56) which cooperate to emanate a magnetic field (Ms) that is torque-dependent. The two magnetised regions may be longitudinally-magnetised (12, 14) through the disc or circumferentially magnetised (54, 56) with opposite polarities. A sensor assembly of non-contacting sensors (26a-26c) is used to detect the emanated field and connected in circuitry to provide a torque-dependent signal. In an alternative a single magnetised annular region is employed. The annular region or regions need not be a complete annulus. The same disc-like structure can also be used as force sensor for measuring bending moments or other forces which result in stress occurring in the disc.

IPC 1-7

G01L 3/10; **G01L 1/12**

IPC 8 full level

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CPC (source: EP US)

G01L 1/125 (2013.01 - EP US); **G01L 3/102** (2013.01 - EP US); **G01L 3/1435** (2013.01 - EP US)

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Cited by

EP1602617A1; US7234684B2; DE102008056302A1; WO2010051871A1

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